THE
VETERINARY JOURNAL

Editor:
FREDERICK HOBDAY, C.M.G., F.R.C.V.S., F.R.S.E.,
HONORARY VETERINARY SURGEON TO HIS MAJESTY THE KING,
OFFICIER DU MÉRITE AGRICOLE (FRANCE),
CAVALIERE DEI SS. MAURIZIO E LAZZARO (ITALY),
HONORARY MEMBER OF THE AMERICAN VETERINARY MEDICAL ASSOCIATION,
AND FORMERLY PROFESSOR IN THE ROYAL VETERINARY COLLEGE, LONDON.

Sub-Editor:
GLADSTONE MAYALL, M.R.C.V.S.

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Editorials

THREE "DESIRES" OF THE VETERINARY PROFESSION.

In a recent after-dinner speech at the Central Veterinary Society, the President of the Royal College of Veterinary Surgeons stated that if he were asked to name some of the principal objects of the Veterinary Profession, and of a Society like the Central, he would say, "without hesitation, that the Veterinary Profession desires to have—firstly, its proper place in State Medicine; secondly, an adequate part in research, such as is necessary to solve the problems confronting State Medicine, and without the solution of which it cannot be satisfactorily carried on; and thirdly, it desires that those of its members who are engaged in its duties of State Medicine *should receive a fair reward for their services.*" The remark was received with cheers, but one wonders how many of those who were present have really done their utmost to pull every possible string that the objects enumerated above may be attained. *Everybody agrees that the Veterinary Profession ought to have its proper place in State Medicine, and that its members who are engaged in pure research and in the duties of State Medicine should receive a fair reward for their services;* but we talk too much and do too little to attain this object, *and so long as we can find fully qualified men who are willing to accept the miserable salaries and lack of further opportunity which is offered in this country to those who accept State appointments, so long shall we have cause to grumble at the way in which the remuneration is distributed.* Everyone is forced to agree that money is necessary in order to keep up a position as a member of a learned profession, but at the present moment some of what ought to be our best appointments are paid an annual income which is very little above that of an ordinary chauffeur or even a Corporation road-sweeper; and, as we drew attention a few months ago in the columns of the VETERINARY

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JOURNAL, even a rat-catcher's salary is better than that which is offered for some of our whole-time appointments. Our desire to occupy our proper place in State Medicine has existed for many years, but to attain it a clever young graduate has to go to the Colonies. In other European countries and on the continent of America the veterinary graduate has a good position awaiting him, but England, the home of the most valuable animals in the world, has a most ill-paid State service.

Veterinary research at last appears to be coming into its own, and there is a reasonable prospect that the modern graduate who is fond of the microscope is going to have a chance. The workers under the new schemes of research which are receiving State support have now opportunities such as they never had before of proving their worth, and it will rest with them to show that they are worthy of the trust which is being reposed in them. The proposer of the toast of the Central Veterinary Society, himself a Medical Officer of Health and a Member of Parliament, deplored that we had not yet the vaguest ideas as to the causation and prevention of foot-and-mouth disease or distemper, and stated that it must remain "a blot on modern science and the Veterinary Profession until the origin of these things is discovered" (he might also have added influenza, measles, and a few other ailments, the discovery of whose cause is still a "blot" on the copybook of the human medical world). The "blot" is really not at all on the Veterinary Profession, but on the lack of opportunities and pecuniary encouragement which has been given to Veterinary research workers in the past; for if given the opportunity, the Veterinary Profession can easily find the brains to "make good." It is a disgrace to the Government of England that so little State aid has been given to the profession, and one has only to visit the Veterinary State Laboratories and Service on the continent, and to make comparisons both in regard to remuneration and equipment, to find how much it reacts to the disparagement of Great Britain. The remedy lies, however, largely with ourselves. It is impossible for the State to do without us, and if we, as a profession, acted up to our motto of *Vis Unita Fortior*, and were as loyal to the mandates of our own National Veterinary Association Council as are the Medical Profession to the Council of the British Medical Association in the matter of refusing to occupy underpaid whole time billets, we could "keep the ball at our feet."

It is, however, at the fountain head that the reform ought to commence, for so long as the Government only offer a paltry £200 a year to fully qualified men, so long will our Corporations and County Councils consider themselves generous in taking that sum as the

standard from which they are to judge their own emoluments. No wonder that the career of a Veterinary State Officer is so often passed over by the best men, and that one of the three " desires " of the profession is stated by its President to be " that those of its members who are engaged in State Medicine should receive a fair reward for their services." The statement is only too true, but the necessity for making it ought not to exist, and the example of the British Medical Council in upholding the pecuniary, as well as the professional, dignity of the whole-time positions of its Medical members might well, with advantage to ourselves (and especially our younger graduates), be copied by us.

Vis Unita Fortior is our motto, but we are not proud of it, or we should use it more and act up to it always.

THE INDIAN CIVIL VETERINARY SERVICE AGAIN.

We understand that the Government of India proposes to promote a certain number of " Provincial " Officers to the Indian Veterinary Service, and, in point of fact, one promotion has already been made. " Provincial " Officers are men who have obtained the diploma of one of the Veterinary Colleges in India, and have been promoted from the subordinate ranks to commissions in the local Veterinary Services.

On the recommendation of the local Governments men are now selected for post-graduate study in India with a view to promotion.

It was originally intended that men so selected should be sent to Great Britain for post-graduate study, but this scheme was dropped and local arrangements have been made. We have no knowledge of the course of study demanded, so we are not in a position to criticise it, but we understand that no educational test is required either before or after selection. This scheme may have some advantages from the point of view of the Government, as it is becoming increasingly difficult to obtain the services of the best men from the British College on the terms offered. We do not consider, however, that it will tend towards the efficiency of the Indian Veterinary Service, and it will certainly not appeal to potential recruits from the British Colleges.

They would find themselves in the position of having to work under men possessing inferior qualifications. Hitherto the minimum qualification required for the Indian Veterinary Service has been that of Membership of the Royal College of Veterinary Surgeons; and, in addition, some post-graduate qualification has usually been demanded. Doubtless " Provincial " Officers selected for promotion are very estimable men in many ways, but we cannot think that it is advisable to make appointments of this kind without a satisfactory educational test conducted by competent examiners.

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General Articles

A PERSONAL EXPERIENCE OF ANTHRAX: A WARNING.

By A. LINTON ROBERTSON, M.R.C.V.S.,
Arbroath.

I RECORD the following case as I feel sure it will be of interest to members of the profession and it may act as a warning.

On Friday, August 3rd, while making a post-mortem examination on a tubercular cow I got a slight scratch on my right forefinger. During the week-end I treated this with tincture of iodine. On Monday, the 6th, a small black point appeared in the centre of the wound and I put on a foment. On Wednesday, the 8th, as the black area was increasing in size, I visited my doctor in the afternoon. I asked him if he thought there was any possibility of anthrax, as the part was so very black—just like the blood of cattle that die of anthrax. In view of the history, and the fact that there were no vesicles round the wound, he said he did not think so, and advised me to continue fomenting.

About 8 p.m. the same day the back of my hand and the glands in my armpit started to swell very rapidly, so I visited the doctor again. By this time the affected part of my finger had swollen and was like an inverted teaspoon. The doctor excised this part and put on another foment, and in a couple of hours the glands and hand were almost normal.

On Thursday my hand was again swollen and the wound was slowly extending.

On Friday the doctor excised another part and suggested that I should examine the wound for anthrax; however, I told him that I did not think that I would find the bacillus, as it died so quickly when exposed to air or to putrefactive organisms, and that I might not find the spore and we might be misled—but I know better now.

On Monday, the 13th, another piece had to be excised, and on Tuesday the doctor arranged a consultation with a specialist in Dundee.

During the ten days at home, apart from the swelling of my hand and glands of the armpit, I had no constitutional symptoms and never missed a meal. There was practically no pain in the wound—indeed, the part seemed quite necrotic and foments of any heat could be tolerated.

On Wednesday, the 15th, I went up to Dundee to consult a specialist. Before expressing an opinion he took me round to the

University, where they made smears from round the wound and also made cultures. Anthrax bacilli were seen under the microscope, and next morning all the cultures were growing.

I went into a nursing home that night. The finger was cauterised under chloroform and large doses of serum were administered intravenously and intramuscularly. I am told that I gave them an anxious few hours on account of anaphalaxis. All I know is that when I woke up next morning my right eye was closed. The last dose of serum or anti-toxin I had was in Salonica in 1918, when I had tetanus anti-toxin, but this did not upset me in the least. I was re-vaccinated in 1920, but it did not "take." I got several more doses of serum intravenously, and on each occasion the following occurred. As soon as the first few drops of serum were injected I had a most peculiar sensation in the affected finger; I then started to sneeze; then the back of my throat seemed to close up and breathing became difficult, and then my right eye began to close. All these peculiarities—as such I suppose they were—occurred before the surgeon had finished administering the serum. I became less and less affected each time I got the serum, until the swelling of my eye was very slight, and disappeared in about half an hour. The first time it lasted more than twenty-four hours. Different veins were used to see if the effects would be different, but they were always the same.

Six days after I got the first dose of serum I came out in a serum rash.

Twelve days after the first dose urticarial-like swellings came out all over my body. Both eyes and nostrils closed and my tongue became so swollen that it filled all the spaces between my teeth and even went between my teeth and my cheeks, and it was with great difficulty that I could breathe. This lasted about twenty-four hours, and shortly after it subsided I felt better than I had done since the trouble started. On some occasions my pulse was so weak that it could not be taken, and I understand my temperature never rose above 97° F.

All the doctors who saw me said I was "a most interesting case," and that they could not understand how I was living. I am now—six weeks later—about all right again but still very weak.

Where did I get the bacillus? The last carcass in which I found the anthrax bacillus was in the beginning of May, and as far as I know all sudden deaths of animals in the district have been reported. The cow on which I made the post-mortem was a valuable Friesian and had been ill for some time, and the reason that I made the post-mortem was because the owner wanted me to send a certificate to

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the Herd Society. Is it possible that this animal could have been harbouring the bacilli in her blood-stream without showing any symptoms of the disease? I did not open the stomach or intestines, nor could I have got it from handling feeding cake. Perhaps it had been on my clothes for some time?

Wherever it came from is a mystery, but this shows us that we cannot be too particular in the treatment of even very small and apparently trifling scratches.

SUGGESTED IMPROVEMENT IN THE BURDIZZI CASTRATOR.

By E. MORGAN, F.R.C.V.S., D.V.H.,
Puerto Cabello.

In the March issue of the Veterinary Journal Mr. Gladstone Mayall, M.R.C.V.S., gives a lucid description of the Burdizzi castrator.

Seeing that Mr. Mayall mentions my name in his article, as one who uses the instrument, and as one who cannot say that it always gives satisfactory results with old Venezolano bulls, I therefore thought it would be advantageous to state my experience, because it is not a case here of castrating an odd bull and a few calves, here and there, as is done on farms in Great Britain, but one is called to operate on hundreds and even thousands in the same ranch. These vary in ages from one to eight years old. In the majority of these old bulls the skin of the scrotum resembles thick leather, unlike the soft and pliable skin of British-bred bulls. Sometimes I am fortunate to meet such bulls in this country, and when that happens I consider it a welcome change, as then one knows that his hands are not going to suffer to the same extent as they do at the end of the day after operating on the typical Venezolano bulls.

The skin covering the spermatic cords of these semi-wild old bulls is studded with ticks, and owing to constant irritation by these parasites the hide gets indurated and resembles a kind of leathery, hard casing around the cord, which makes it most difficult to retain the cord between the jaws of the instrument, because when pressure is applied the cord slips outside the grip of the instrument. When one commences in the early morning and the hands can be freely moved, then the first few are generally done fairly satisfactorily, but afterwards one forgets that there was once upon a time a prophet called Job whose motto was patience. When one has so little feeling in his hands that he hardly knows whether they are his own or belong to his assistant, who is generally a cow-boy, it

is most difficult to feel whether the cord is inside or outside the jaws of the instrument.

It is most disappointing to receive complaints from ranch-owners that a number of should be steers are still bulls, in spite of a bold attempt having been made at crushing each cord in two places.

About two years ago I wrote on several occasions to Major Hobday, describing the defects of this instrument, and suggested

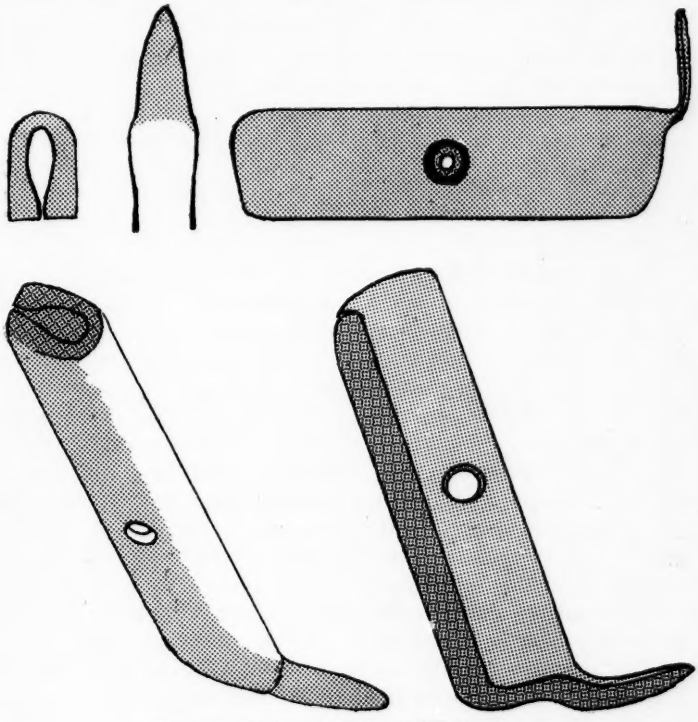

Diagram showing the Clasp and Projection.

an easy way for the instrument makers to overcome these defects by making a few simple alterations. He advised Messrs. Arnold, Giltspur Street, London, who had supplied me with the instruments. They, after a long delay, advised me that my suggestions were tried but proved to be unsatisfactory.

I had now either to abandon the Burdizzi altogether or attempt it myself, so I was fortunate to get hold of a mechanic out here to make this slight and simple addition to the instrument, which is

in the form of a clasp * to fit over one jaw of the instrument, with a small projection about ½ inch long placed at one end of the clasp so as to overlap the extreme end of the opposite jaw, and owing to the presence of this projection, one need not attempt to hold the cord firmly between the jaws of the instrument, but instead to push it towards the outside, i.e. the side which contains the projection. This clasp is held in position by means of a small screw which passes through a drilled hole which penetrates both clasp and web of the jaw of instrument. It would be easy to place projections at both ends of the same jaw, but that would never do, as it would result in either one of these prolongations penetrating the skin of the scrotum. One must refrain from crushing the two cords at the same time with one single grip of the instrument, on account of serious results of cutting off the blood supply completely below the line where the jaws press on the cords; we have often met with ulcers, scirrhous cords, and an occasional death amongst the animals as a result of doing so. I have met with a few cases of scirrhous cords in old bulls even after crushing each cord separately.

This clasp, besides serving a purpose of supplanting the projection, also answers another purpose, inasmuch as these instruments, after a long continued use and strain whilst crushing thick cords, have a tendency to leave too wide a space between the two jaws, i.e. the jaws are too wide apart to crush effectively the cords of small-sized animals such as calves.

While discussing the merits and faults of the instrument with Mr. C. Hartley, F.R.C.V.S., of Lincoln, last year, also with Mr. Good, M.R.C.V.S., of Lampeter, I understood from them that they met with this same trouble.

This trouble could be overcome to a certain extent by keeping a large and a small sized instrument, one for old bulls and the other for young bulls and calves, but for a practitioner in Great Britain who does not castrate hundreds of old bulls daily as is done on cattle-ranches, it would save him from speculating on two different sizes of expensive instruments by having two or three clasps of different thickness to fit on the jaws of the larger-sized castrating instrument, then he could use it for both small and large sized animals.

It is most unfortunate that an instrument with so many fine adjustments should not be altered and made a nearer approach to perfection before it is turned out of the hands of the instrument makers.

* The diagram might be of assistance to demonstrate the shape of this clasp, which has been sketched from different angles.

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Messrs. Arnold have a new model which is intended to answer the purpose better than the Burdizzi. I examined it last year while it was yet in the crude state. This instrument has the jaws and handles in line, something after the fashion of a long pair of scissors, but unlike the latter, inasmuch as the jaws meet and do not pass one another. Judging by the length of the jaws, this instrument is intended for crushing the two cords with one single grip; this as we know is most unsatisfactory. I rather like the idea of having

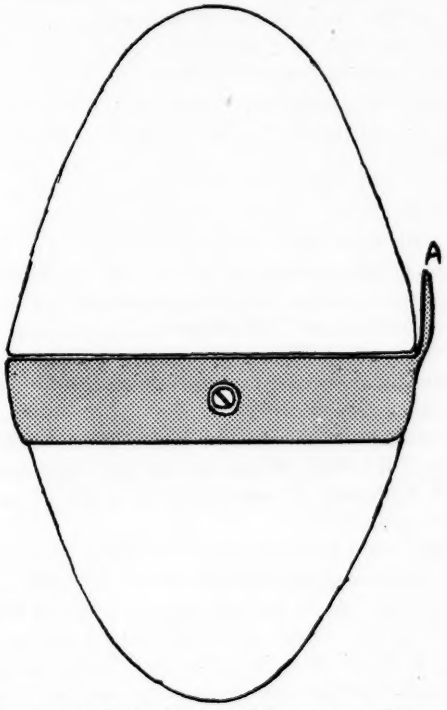

Diagram illustrating the Projection in Position when the Instrument is closed.

the jaws and handles in line, because when manipulating the cord between the jaws of the Burdizzi, one is handicapped for space to work the hands.

An interested firm of instrument makers who could turn out a more suitable and reliable instrument would have almost an unlimited demand for such in a tropical cattle country like this or Brazil, where every wound is soon invaded with maggots. When bulls are castrated in the old-fashioned manner and turned out to the open

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plains, at least 10 per cent. of them die, as the cow-boy is unable to treat them owing to the vast area of ground, as he cannot discover only a small portion of them in time. What he most often finds are vultures (turkey buzzards) making circles in the air whilst guarding their prey.

Many of the cattle owners in this country believe that they have the divine rights, to free their animals of maggots by means of prayer alone, but the most unfortunate part of it is that they must have the animals in front of the faith curer while he is delivering the oration, otherwise it answers no good purpose. Since the advent of creolin into the country, these faith healers have to take a second place, as creolin has proved more effective at certain areas of the body where the animal cannot use its own tongue, such as on the head and neck.

If the Burdizzi castrator was modified, I cannot see any reason against using it for castrating horses and donkeys, but in its present form it is far from being a suitable one, as the conformation of the appendages of the equine and bovine animal is quite distinct, and furthermore in the equine animal there is present a great quantity of sebaceous secretion known as sebum, whose principal constituents are fat and calcium oxolate. When the horse perspires this sebum acts like a soap-lather, which makes matters still more difficult. I have succeeded with great difficulty to castrate a donkey by means of this instrument, but I am not anxious to attempt another one until I see a more suitable instrument than Burdizzi in its present shape and form. An instrument resembling the one designed by Messrs. Arnold of London appears to be a nearer approach for castrating the equine animal.

THE EXAMINATION OF THE CAMEL FOR SOUNDNESS, WITH INDICATIONS AS TO ITS AGE.

By D. S. RABAGLIATI, O.B.E., B.Sc., F.R.C.V.S., Major, late R.A.V.C.
Director, Serum Institute, Ministry of Agriculture, Egypt.

(*Concluded.*)

Examination of the Throat and Neck.

While the camel is still "barrakking" one must examine the neck and trunk, beginning at the near side and working right round the animal. The description given naturally refers to both sides of the body, the different parts being taken in the order in which they are situated.

The larynx may be examined for irregularities or abnormal conditions, which, however, are rare, and the upper rings of the trachea

may be pressed to test the presence of a cough. It is difficult to make a sound camel cough. Cough, when present, must be considered an unsoundness. A soft cough is symptomatic of laryngitis or acute bronchitis, and a hard paroxysmal one of chronic lung trouble. Camels which are known to have a chronic cough lasting for several weeks are usually the subjects of lung abscesses. Strangely enough, camels with advanced pulmonary tuberculosis rarely if ever cough.

Fibrous tumours, often containing pus, are of common occurrence about the throat. They are either the result of wound infection or are due to suppurating glands. If large and containing pus, they should be considered as an unsoundness.

Dermoid cysts, often up to the size of a large orange, may occur about the throat and upper part of the neck. They are quite harmless unless they have been opened and are not well healed up.

It is not common to find scars over the jugular veins due to venesection, as bleeding from this vein in the camel does not seem to be a common native practice. If present, however, they are probably of little or no importance.

The parotid glands may be indurated and enlarged, but this does not seem to be of any account. Should, however, they be the seat of pus, it should lead to immediate rejection.

Goitre is occasionally met with, giving rise to great enlargement of the thyroid gland. It is chronic in nature, but the writer has never seen any ill effects from it.

Two types of wounds or scars may occur on the lower part of the neck just in front of the withers. (1) Those caused by the yoke, which are seen in camels which have been used for ploughing or for turning water-wheels. (2) Those caused by carelessly tying down a camel without a pad to protect the neck from the rope, the rope thus cutting into the skin. The muscles of the neck may be underrun with pus, the ligamentum nuchæ may even be implicated, or in other cases fibromata may be present, brought about by some infection of the wounds. All such wounds, unless perfectly healed up, should bring about the rejection of the animal, and the nearer to the withers, the more serious they are.

The prepectoral lymphatic glands are very often enlarged. When they are excessively so or suppurating, the camel should be rejected.

Examination of the Withers.

The withers must not be too broad or the saddle is difficult to fit. Care must be taken to see that there are no sores covered up

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by a hard horny scab. Firing scars in this position should always be looked upon with suspicion, and greater care taken to ascertain if the withers are sound.

Examination of the Hump.

It is said that the condition of the hump is a good indication of the general health of the camel. This is as a rule true, but some animals in a debilitated state manage to retain a well-developed hump, while in others the hump is so poorly developed as never to become large, no matter how good the condition of the animal is. The hump should be well formed, not too large and fat, not situated too far back, and must not hang down to one side. Over-developed or under-developed humps, or uneven or irregular ones, give rise to much trouble in the fitting of saddles. Sores on the humps, which are mostly due to bites or saddle injuries, may be covered up by the wool and not seen at first. If these are neglected they may become serious.

Examination of the Back and Ribs.

The shape of the back is of the greatest importance. Narrow, flat-ribbed camels whose ribs are not well " sprung " are never able to stand hard work. Flat ribs are very common in camels, and account for most of the " weedy " animals met with. The muscles of the back must be well developed, otherwise sore backs are sure to result.

This region is often the seat of chronic sores which render the camel unsound. No domestic animal suffers from sore backs more than the camel, and great discretion is needed in deciding whether they should lead to rejection or not. Care must also be taken to see that there are no fractured ribs, which may be the source of future trouble.

Examination of the Loins.

Sound loins are of the utmost importance in working camels, and yet it is rare to find many that have done much work under native conditions without some gall or scar. The commonest sites are over the lumbar transverse processes and in the central line just in front of the sacrum. There is a liability to large inflammatory tumours in these positions leading to difficulty in fitting the saddles, and these may even be complicated by fractured portions of the vertebræ. In Soudanese camels in particular, a small horny core may project out from an old scar on the loins. This usually grows from a transverse process of a lumbar vertebra, and can be cut off like a corn on the human foot. Excision is useless, as matters are

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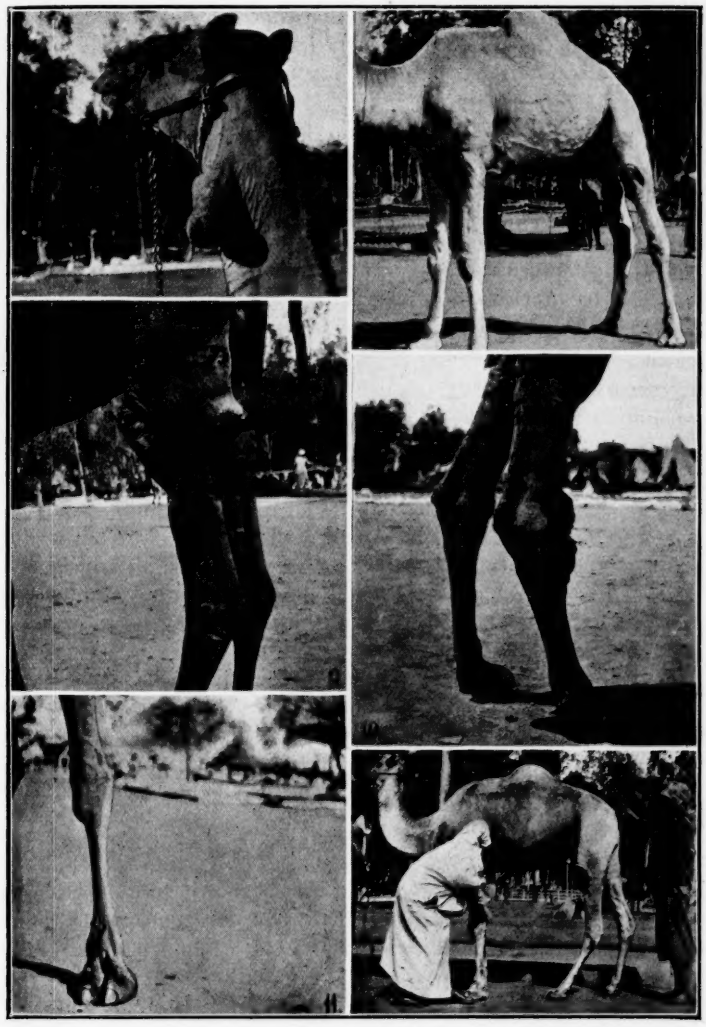

PLATE II.—7. Dermoid Cyst of Neck (Soudanese Camel). 8. Camel affected with Onchocerca Nodules of the Skin. 9. Tumour over Popliteal Glands due to Filariasis. 10. Fibrous Tumour of the Hock following Sallenders. 11. A Spavin of the Near Hock. 12. An Examination of the Sternal Pad. (Note method of restraint by holding up the tail.)

thereby only made worse. As in the case of sore backs, great discretion is necessary before deciding on passing or rejecting a camel for this trouble, for it is manifestly impossible to leave all camels having old scars or loin thickening when many animals are required.

Examination of the Quarters.

Fibrous inflammatory tumours may be present on the croup, but unless they are raw or likely to be bruised they need not cause rejection.

The gluteal region must be felt for fluctuating swellings, which indicate the presence of pus under the muscles. These are due to abscesses having formed in the pelvic cavity, usually commencing in the glands and thought to be due to filariasis. When opened they give rise to incurable fistulæ, and must always be classed as unsoundness.

In Egyptian camels it is common to find a small cross made by a firing iron over the tuber ischii on one or both sides. This mark is rarely present in sound camels, and usually indicates weakness or faulty action of the hind limbs. Of all the firing marks inflicted by natives on camels, the writer believes this to be the most certain to point to some permanent defect.

Examination of the Tail.

The tail must be examined for the presence of sores due to faulty cruppers or injuries caused by the common practice of tying camels in line from tail to head. Notice must also be taken to see that the tail has not been docked and the wound still unhealed.

Examination of the Perineum and Scrotum.

The perineum may be looked at for the presence of pox lesions or the marks of diarrhœa on it and on the hind quarters generally. The fæces of the camel should never be soft as in the ox, except in the male when in a state of "masth." The normal fæces should be hard and roundish, the balls being convex on one side and concave on the other. In chronic constipation the fæces are often elongated and spindle-shaped with twisted ends. This is always a suspicious symptom of trypanosomiasis.

The testicles usually lie horizontally in the scrotum, which has its long axis antero-posteriorly. A few Soudanese camels, however, have large pendulous scrota, which do not seem to be in any way harmful.

The scrotum may be the seat of sores, injuries, or of pox lesions, or the testicles may be much enlarged and cystic due to the presence of a worm, *Filaria evansi*, which often occurs in large numbers coiled

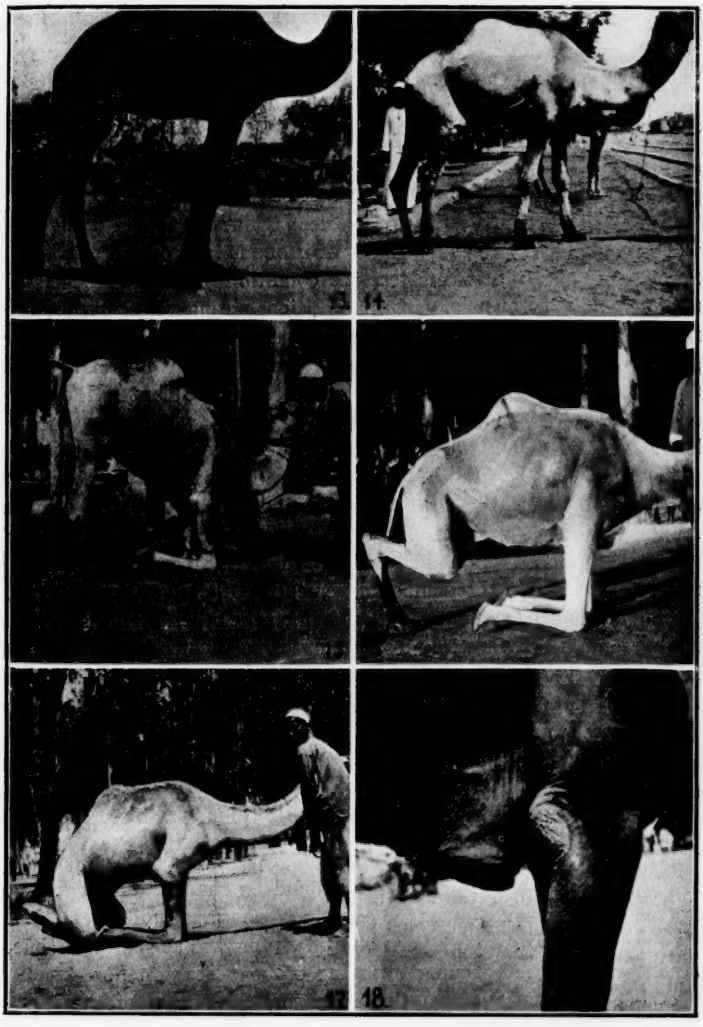

PLATE III.—13. Sub-laxation of the Off Patella. 14. Sprain of the Flexor Metatarsi Muscle of the Off Hind Leg. 15. A Case of Polyarthritis in a Somaliland Camel. Unable to "barrak" owing to Arthritis of the Joints. 16. Cow Camel unable to "barrak" easily owing to Arthritis of the Stifles. 17. Camel unable to "barrak" easily owing to Arthritis of the Shoulder Joints. 18. A Defective Type of Sloping Sternal Pad.

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up in them. Unless the camel is required for stud purposes, or the testicles are so large as to interfere with the action of the hind legs, this condition does not seem to interfere with the working capacity of the animal.

The vulva and vagina of the female may be examined for sores, chronic discharge, or tumours.

The Action of Rising from the Ground.

Before allowing the camel to rise again, it should be noted whether the hocks are bent equally or if one is held out incompletely flexed. Most native buyers test the condition of the gastrocnemius tendons while the camel is in this position, noting whether they are slack or taut. They then try to slip them off outwardly from their positions in the groove formed by the distal end of the tibia. Most tendons can be pushed off if enough force is used, but if they slip off too easily it is a sign of weakness, especially when rising with a load. In this case the camel cannot be considered sound.

The act of rising should be done quickly and easily, the camel raising its hindquarters while still resting on its knees and then rapidly springing to its feet. Some camels have great difficulty in rising, dragging the hindquarters forward by means of the shoulder muscles in a kind of crouching movement. Others get up unevenly, placing more weight on one hind leg than on the other. This is always due to some defect or weakness. Many camels which have difficulty in rising have firing marks over the loins, which should attract attention. The causes which lead to difficulty in rising are essentially those which make "barrakking" difficult. Any such defect is a serious unsoundness.

The Action.

Having got up, the camel should be trotted away from the examiner for about fifty yards, sufficient rope being allowed so that the head is not pulled on; next it should be sharply turned round, trotted back and taken past the examiner, who must note the action. A camel moves its two near or two off legs forward at the same time, which gives it that peculiar swinging or boat-like action.

While going away from the examiner, the action of the hindquarters must be noted, whether even or uneven, or whether lameness is apparent.

"Cow-hocked" camels are common, and in exaggerated cases the hocks may actually rub together, causing sores. Such camels rarely show sufficient hock action, and if the condition is bad they should be rejected.

Camels which "go wide" behind are often very fast and much to be preferred to the last mentioned type.

Fetlock "brushings" of the hind legs is rare in the camel, but some drag their hind legs, scraping their toes along the ground. This may merely be due to lack of condition.

Unilateral or bilateral atrophy of the gluteal muscles must be looked for, but the condition of those of the thighs is the more important. The latter must be well developed and firm, as they play such an important part in locomotion and kneeling down.

Slight lameness should be looked for on turning, and special notice taken to ascertain if there is stringhalt. This condition is both more common and of more importance in riding camels, and may seriously affect them on long journeys.

Chronic sprain of the flexor metastarsi muscles is not uncommon in the camel, and is shown by the subject being unable to flex the hock of the affected limb and bring the foot forward. The leg is merely dragged forward, the gastrocnemius tendon remaining slack. The condition is most characteristic, and should immediately cause rejection. Camels suffering from this are often fired over their hamstrings by the owners, who quite misapprehend the true cause.

When the camel is trotted towards the examiner he should note the head, which should be carried level. A nodding head, as in the horse, denotes lameness.

Shoulder lameness, more common in the camel than in the horse, is characterised by inability to bring the leg forward, and produces a dragging action and throwing out of the elbow. A "tied-in" action of the fore legs is exceedingly common, and usually indicates shoulder sprain, or possibly suprascapular paralysis. When it is considered the parts the shoulders play in going down and getting up again, especially when the camel is loaded, this is not surprising. A "tied-in" action is serious in a riding camel, but in a slow baggager, if slight, the working capacity may not be seriously affected.

A peculiar condition is sometimes met with in which there is an exaggerated flexion of the knee, the foot being brought up level with or even higher than the elbow. This is due to degeneration following sprain of the extensor metacarpi and extensor pedis muscles. These muscles cannot act against their corresponding flexors, and the limb cannot consequently be brought forward properly. It is an incurable unsoundness.

"Brushing" in the camel is of two kinds.

1. "Elbow Brushing."—This may be of three varieties:—

(*a*) The sternal pad rubs against the forearm just below and inside the elbow pad, often producing a horny area or fictitious pad

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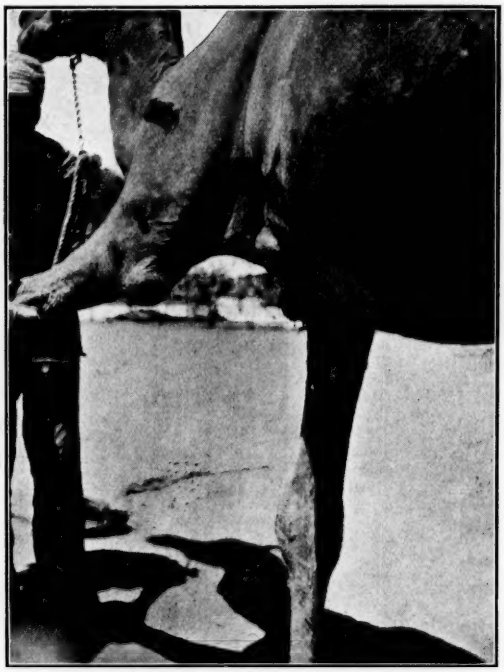
on the leg and an inflammatory tumour on the portion of the external pad struck.

(*b*) The elbow pad rubs against the chest wall just above the sternal pad, making a thickened abnormal pad on the ribs. This may become inflamed, but as a rule is not so serious as the first-named type.

(*c*) A large fold of skin occurs in the axilla, which becomes inflamed by rubbing at each step. This is the most serious form.



19.—A Case of "Elbow Brushing" causing a Growth on the Ribs.

2. Fetlock "Brushing."—This is due to one foot striking the opposite fetlock as in the horse, and is as a rule the result of the toes being turned out. The writer has only noticed this in the fore legs, but it is a dangerous fault in riding camels, rendering them liable to come down. Both elbow and fetlock "brushing" being due to faulty conformation, little or nothing can be done, and should be considered as unsoundness. It is always liable to cause lameness, and so render the subject useless for long journeys.

Examination of the Sternal Pad.

The sternal pad must be examined with the animal in the standing position, an attendant holding the tail forward over the croup to prevent the camel from kicking. There is no structure of the camel of more importance than this. The pad should be large, flat, almost heart-shaped (the apex being forward), set on a prominent boss of bone, well let down from the sternum, and sufficiently well developed to bear the weight of the animal and keep it off the abdomen. When the pad is insufficiently developed, the abdomen comes into contact with the ground, and bruising behind the pad is likely to result, causing thickening of the skin or even abscess formation. The pad should be like thick, tough leather, rough on the surface, firm to the touch, and yet elastic, due to the fibro-elastic cushion of the structure. It must be regular in shape, not projecting to one side or the other, free from wounds, and above all it must not be convex. Some pads are slightly concave, and so do not bear enough weight; but pads which are convex, or those which slant forwards, are the worst types, as they are liable to injury at the point, owing to the weight not being evenly distributed.

Fibrous tumours may occur at the back of the pad, and these may even have fistulæ running into them ; but inflammatory growths at the sides, however, are the worst, as they always indicate "elbow-brushing." The pad must be carefully examined for fistulæ or wounds, which may be cleverly covered up with mud to deceive the purchaser. Pads of a spongy nature, pads which are deformed, or those which have any injuries, are always unsound.

Examination of the Abdomen.

The abdomen should be well filled, not " tucked up," and free from injuries, especially those caused by " barrakking."

Herniæ must be looked for, and if present the camel should be rejected.

Examination of the Limbs.

The examiner must now proceed to examine the limbs in a systematic manner, running his hands down the front and then the back of each limb in order, as is done in the examination of the horse.

1. The Fore Limb.—The following are the chief points to notice :—

(*a*) *The Shoulder.*—Atrophy of the shoulder muscles, injuries to the joint, tumours, chronic sprain of the shoulder muscles, and arthritis, though the two last named conditions should have been diagnosed during the first part of the examination.

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(*b*) *The Arm.*—Defects of this region are not common other than injuries, and these are usually readily apparent.

(*c*) *The Elbow.*—Capped elbow, elbow pad injuries, and signs of "brushing" all constitute unsoundness.

(*d*) *The Forearm.*—The chief defects are those of traumatism, especially following bites; chronic lymphangitis may give to cording of the lymphatic vessels and enlargement of the glands in the axilla.

(*e*) *The Knee.*—Wounds or defects of the knee pad, arthritis and deformities of the joint, all constitute unsoundness. In Algerian camels a "calf-kneed" condition may be present, the joint being too far back. This is an unsoundness. Bent knees as they occur in the horse are not met with in the camel.

(*f*) *The Fetlock.*—Exostoses, tumour growths, "brushing" marks, and "over-shot" fetlocks, all constitute unsoundness.

(*g*) *The Foot.*—This must neither be too large nor too flat, and the skin must be free from lesions of mange, which are especially common in the interdigital region. Care must be taken to see that there are no wounds of the claws, exostoses on the digits, nor inflammatory tumours, all of which cause distinct unsoundness.

The sole must be hard, firm, and yet elastic, free from cracks, fissures, or bruises. A camel with a thin sole to the foot should be avoided, as it is always liable to become foot-sore with hard work.

2. The Hind Limb.—The following must be noted:—

(*a*) *The Quarters.*—The condition of the gluteal muscles has been alluded to, but note can now be taken of injuries or abnormalities of the pelvis or of the hip-joint. Atrophy of muscles in this region, which can be better seen in the standing position, indicates chronic lameness, unless it is merely due to general debility.

(*b*) *The Stifle.*—Stifle lameness, if present, should have been diagnosed previous to this, but the stifle joints may now be examined for enlargements or irregularities, which may indicate arthritis. Of great importance is the stifle pad, which must be firm, tough, and free from all wounds and bruises. All pad wounds heal very badly, and are always serious unsoundness. Partial or complete luxation of the patella is a common condition in the camel, and is always of the lateral variety, the patella being displaced in the outward direction. This is due to incomplete development of the condyles of the femur, or more rarely to rupture of the lateral ligaments of the joint. In camels subject to this, the patella can readily be displaced by the hand, and usually equally readily reduced again. Such a condition is, of course, an unsoundness.

(*c*) *The Thigh.*—The thigh muscles must be well developed, as they are of such extreme importance to the camel. The chief defects

of this region are insufficient development of these muscles, abscesses of, or fibrous tumours over, the popliteal gland. These are due to suppuration of the glands in question (probably the result of filariasis), which burst outwards. If well healed and the action of the limb in " barrakking " is not interfered with by these fibrous thickenings, they may be passed over. If otherwise, the camel must be rejected.

(*d*) *The Hock.*—This joint should be large, square, well developed, and must not taper off downwards. In camels with " well let down " hocks, the cannon bone should be almost straight, or only very little inclined forwards, and the point of the hock slightly posterior to a vertical line from the tuber ischii to the ground.

Sickle hocks, in which the joints are set too far back and the fetlocks too far forwards, are a very common defect. When this is present to an exaggerated degree, the camel must be rejected.

On the other hand, camels with too straight hocks must also be considered unsound.

Hocks must be examined and compared with each other as in the case of the horse, and enlarged or spavined hocks—for spavin does exist in the camel—must be considered as unsound.

Bruising on the outside of the hock, due to rubbing on the ground when " barrakking," often produces some skin thickening, though if this is slight it need not be looked upon as an unsoundness.

There is a condition commencing like sallenders of the horse's hock, which may be met with in the camel. It is due to the urine trickling down the hock on the inside, and is more often seen in cold than in hot weather. Infection of such chapped areas may take place and produce large fibrous thickenings, which may interfere with the flexion of the joint.

Capped hocks are usually due to some skin thickening, and are more unsightly than actually the cause of unsoundness.

(*e*) *The Metatarsal Region and Foot.*—Examination of these parts must be similar to that of the corresponding region in the fore leg. It is more difficult to lift up the hind foot of a camel than a fore one, but as a matter of practice this is not often necessary unless something is seriously wrong. It is usually sufficient merely to inspect the feet while the animal is walking.

Examination of the Sheath and Penis.

In the camel the penis points backwards, and the urine is ejected in this direction in a very fine stream, the camel being able to urinate while walking. Any difficulty in urination is serious, as the urethra is so fine as to absolutely preclude the use of a catheter.

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Swellings of the sheath are often due to trypanosomiasis, and should cause rejection unless they can be explained otherwise.

Examination for Strength and General Fitness.

To complete the examination it is necessary to test the camel's carrying power. A camel fit for baggage work should easily be able to rise with and carry at least three big men, and one for riding purposes with at least two. The camel must be "barrakked," the men climb on its back, when it must be made to get up, walk about, and then go down once more under the load. The way it gets up, walks, and then "barraks" again is an excellent test of its power.

20.—Testing a Camel's Carrying Power. Hind Legs held too far back.

If desired, a camel can be saddled, loaded with grain sacks up to any weight required, and similarly tested.

The wind of a camel is rarely wrong, though fat camels blow and grunt on exertion when not fit.

Although the examination appears to be a formidable process, yet with experience and with two or three good men available it can be carried out in a few minutes.

Owing to the great importance of trypanosomiasis in camel practice, a word about this is necessary. It is impossible to examine a camel properly for trypanosomiasis in a short space of time, so as to preclude all possibilities of this disease being present. Blood films may be taken and examined either wet as cover glass preparations, or they can be fixed, stained, and examined at leisure. Positive finding is of course certain evidence of infection, but when negative

it is not possible to say definitely whether or not a camel may be carrying the parasites.

Only daily temperature takings and blood examination over a prolonged period or even blood inoculation into experimental animals can be absolutely relied on.

The veterinary surgeon has in most cases merely to rely upon his general examination and be content with taking the risk.

"Rutting" or "Masth."

Male camels are liable to rut during the cold weather, and may refuse all food for a time, becoming also very vicious and objectionable. This is a physiological condition, and unless the camel has become so debilitated as to be of no use, it cannot be rejected as actually unsound. Hard work is usually the best remedy. "Rutting" is not seen in the female, which is altogether a more quiet and tractable animal.

Clinical Articles

TWO FATAL INJURIES FROM SWALLOWED THORNS.

By M. DUGDILL, M.R.C.V.S.,
Patrington, Hull.

Case I.—Receiving a message to see a horse which kept trying to vomit, after questioning messenger, I concluded that I had a case of choking to deal with, so went prepared with the gag and probang. I found a useful four-year-old gelding, which had just been brought in from ploughing, showing the usual symptoms of choking. I fixed the mouth gag, and on feeling at the back of the throat I found a piece of stick, which on being extracted proved to be a piece of briar 11 inches long. The animal was treated with potassium chlorate, etc., in drinking water and electuary. The horse could never be got to eat anything, and died a week later from septicæmia.

Case II.—I was called in when passing a farm to see a steer, as the animal would not eat. I found nothing special to account for the loss of appetite, and as the beast was fat and being sent to market on the Monday (this was Saturday) I ordered a little linseed oil to be given. However, during the evening owner called in to say he had had the steer slaughtered, and had found in the lower part of the œsophagus a piece of thorn-bush about the size of a teacup. It is customary in this district to mow the grass of the dykes for hay, and thorns are often found amongst it.

The case is interesting on account of the absence of any signs of choking.

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OSTEOSARCOMA OF THE MAXILLARY SINUS.

By W. HUGHES, M.R.C.V.S.,
Caerwys, North Wales.

I was called to see a three-year-old cart mare, in good condition, but unable to work on account of dyspnœa on the slightest exertion.

Upon examination of the nostril I could see the end of a tumour-like body which was solid to the touch and immovable.

I trephined the maxillary sinus, but found it to be completely filled up with osseous formation.

Thinking that a molar tooth was at the bottom of the mischief, I punched out the molar.

No benefit resulted, and the mare was destroyed. Post-mortem examination revealed the tumour in the maxillary sinus to be an osteosarcoma.

CÆSAREAN SECTION IN A BITCH.

By H. B. COLLET, B.V.Sc., M.R.C.V.S.,
Tring.

On the morning of October 30, 1922, I was attending a whelping case in which delivery of one pup had been effected, but although pituitrin ½ c.c. had been injected and the presentation was normal, further headway seemed impossible. The bitch, a very small mongrel fox terrier, had been lined by a dog about double her size.

Cæsarean section was suggested, and the owner's consent obtained. The operation was carried out under chloroform anæsthesia with the owner and one of his farm hands assisting. Previous to the operation all instruments and materials had been boiled, and the operative area cleaned and painted with tr. iodi.

A large incision was made along the median line, and the body of the uterus, with the left horn, was brought outside the abdomen. This was packed around with warm absorbent cotton, and an incision was made on the inner surface of the horn close to the body of the uterus. The incision, at first very small, was very carefully made, so as not to injure the fœtal membranes, and enlargement was carried out with the aid of a grooved director.

The pups, five in all, were removed with the fœtal envelopes intact. After two pups had been removed the other horn was brought outside the abdomen. As each pup was removed the uterus was

steadily contracting, so much so that by the time the last pup had been removed the size of the uterus was not far removed from normal. Several Lambert's sutures of fine silk were used to close the uterine incision, and a double row of sutures was used for the abdominal wound. With the exception of a small amount of stitch suppuration, recovery was quite uneventful.

A CURIOUS COLLECTION OF FOREIGN BODIES SWALLOWED BY A PUPPY.

By FREDERICK HOBDAY, F.R.C.V.S.,
Kensington, W.

THE patient, a Cocker bitch pup, born the 9th of February, 1923, and purchased by the present owner (a medical man) on the 7th of April, had always shown a marked tendency to swallow articles of various kinds.

It had had no previous illness, but had been treated on two or three occasions for round worms.

On the 10th of April it vomited a quantity of red-lead, obtained from a kitchen boiler, which was being cleaned and renovated by some plumbers.

On the 26th of April it passed in the motion a maid's small stock collar, believed to have been swallowed on the 23rd of April.

On the 30th of April it passed in the motion a lady's crêpe-de Chine handkerchief (not known when swallowed).

About a week later it swallowed a pearl collar stud in the evening and passed same in the motion the following morning.

Whilst away at the seaside during July and August it crunched up and swallowed a large number of shells from the beach, and was observed to pass a motion with seven pebbles in it.

Shortly after this episode it passed a motion containing portions of a leather strap in pieces about 1½ inches long, ½ inch broad, and ⅛ inch thick: about 6 inches of strap in all.

On the 3rd of August it was seen to swallow a piece of slate about 1½ inches by ¾ inch by ¼ inch: this has not been seen again up to the present.

On the 12th of August it swallowed rapidly (without chewing) a lady's crêpe-de-Chine handkerchief the same size as the one previously swallowed. This was passed intact three days afterwards.

On the 20th of August it was taken very ill with persistent colic and pains, and vomited (with food) a number of pieces of india-rubber (probably swallowed on the 19th).

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There were no symptoms or indisposition following the swallowing of the various articles above enumerated except the india-rubber.

Bits of string, paper, matches, and all sorts of other materials of lesser note have been found in motions from time to time.

The india-rubber caused colic for about forty-eight hours, this being treated successfully with a hypodermic injection of apomorphine followed by doses of liquid paraffin and chlorodyne.

GRASS DISEASE ?

By PERCY WELCH, M.R.C.V.S.,
Saffron Walden.

On June 12th last I saw a four-year-old shire mare at a farm eight miles from here. She was showing slight symptoms of colic. The owner would probably not have sent but for the fact that he lost a useful horse four days previously after only a few hours' illness. The usual treatment was pursued. A ℥ vi. ball and cordial draught given, also gr. i. arecolin hypodermically, and a message left, "No news, good news."

Nothing more was heard until Sunday evening, June 24th, when a message came for me to see her again. I was surprised to find her in a greatly emaciated state. Back arched like a bow, temp. 102·4° F. Head in one corner of the box, looking round to either side, occasionally pawing, but not showing a lot of pain. The appetite was fairly good and bowels normal. A rectal examination revealed nothing. Prognosis bad. I gave a dose of medicine then, but the owner refused to have her further treated.

On June 26th Mr. Mason, M.R.C.V.S., Bishops Stortford, saw the mare with me. She was then standing with her four feet in a row and would occasionally press her chin on the sternum as if about to vomit. Other symptoms were the same. A few days later it was reported to me that a yearling colt I castrated there on May 4th was showing the same symptoms as the mare, but when feeding he would alternate a mouthful of food with a drink of water. He was not treated. On July 24th they were both shot in the presence of Mr. Mason and myself, and a thorough post-mortem made. All organs, excepting the spleen, appeared perfectly healthy and normal, and this (the spleen) was an enormous size in each case. Both stomachs contained food.

We regretted very much that a camera was not handy, as a snapshot of these would have been well worth printing. Both animals were bred on the farm, but had never been together. Was this "Grass Disease ?"

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CHRONIC CONJUNCTIVITIS WITH CHEMOSIS IN THE CAT.

By HENRY GRAY, M.R.C.V.S.,
London.

Looking back for more than a quarter of a century, I have observed many cases of persistent conjunctivitis with intense chemosis following an attack of distemper in the adult cat which has defied all kinds of treatment but perforation of the cornea with escape of aqueous humour.

The conjunctiva remains congested and swollen to such a degree that it is everted, and remains so for several weeks unless paracentesis is performed or a perforative ulcer appears, when immediate relief follows, and the eye, itself gradually returns to its normal state. It is generally difficult, if not impossible, to examine the eye in consequence of the intense photophobia and the swollen condition of the palpebral conjunctiva and that covering the protruding membrana nictitans. After the instillation of cocaine and adrenalin one may be able to get a glance at the cornea, which at first appears normal, but after sometime it becomes smoky and seems abraded. This goes on until true ulceration sets in, and progresses until the whole thickness of the cornea becomes perforated, when the aqueous humour escapes.

Evidently the dense cornea is unyielding in the cat, and thus intense pain is caused as instanced by the photophobia. It may here be stated that the cornea is much thicker in the cat than in the dog. As to the true nature of this affection, it must be left *sub judice* until some more precise observations, clinical, anatomical and histological, are made. It seems to affect only one eye. It should be differentiated from the acute conjunctivitis with chemosis seen so often in young cats affected with distemper in which there is often a great deal of catarrhal discharge.

Cocaine and adrenalin give a certain amount of relief, but they do not cure the malady.

Is this affection due to some deep-seated affection of the eyeball, and the swollen conjunctiva is only an external expression of it? Or is it simply a conjunctival affection producing by its swollen condition pressure on the cornea as to alter its nutrition and set up ulceration and perforation? Apparently early paracentesis of the anterior chamber is the most rational treatment.

Œdematous chemosis without inflammatory congestion is sometimes seen in the cat, disappearing rapidly by the installation of adrenalin.

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CHRONIC PYOMETRITIS IN A BITCH, OVARIO-HYSTERECTOMY, DEATH.

By W. E. ARMSTRONG, B.V.Sc., M.R.C.V.S., D.V.H.,
Wigton, Cumberland.

During the last month I was requested to examine a ten-year-old bitch which had been ill for ten days, and during the last four days she had vomited frequently.

The history was as follows: there had never been any signs of ill-health until ten days previous. She had had pups once yearly since she began breeding until the last two years, during which time intercourse had been unfruitful. The last œstrum was three weeks prior to my examination, but on account of her age she was not allowed service. The bitch began to lose flesh after the termination of the period, and for ten days she had eaten nothing at all. During the last four days vomiting had been noticed. The bowels had responded to a dose of castor oil, which had been given by the owner three days before my seeing her.

Examination revealed a half collie bitch in rather poor condition, lying in a semi-conscious state, and though previously on the alert she showed no resentment to examination. The temperature was 103° and the pulse weak, numbering 90 per minute. There was a fœtid odour from the mouth. The bowels had been moved during the day, and appeared normal, though small in quantity. There was no undue distension or enlargement of the abdomen, and palpation was easily carried out. When made to walk, it was seen that the hind legs were carried as if stiff, and there was great disinclination to move. On palpation the right side of the belly was normal; on the left side pain on pressure was noticed. Two swellings could also be detected. One ran transversely across the abdomen behind the umbilicus, not painful on palpation, and about the size of a thick broom-handle in circumference, and so far as I could determine not connected with the second swelling or with the pelvis. The second and larger swelling lay along the costal border on the left side, and had the feel of a distended stomach. No matter in what position the bitch was held did either swelling alter in location, and this led to difficulty in accurate pre-operative diagnosis. There was no discharge from the vulva, and so far as I could make out there never had been any.

To one more thoroughly versed in canine practice, the diagnosis would undoubtedly be easy, but to myself it was impossible (pre-operative). The fact that the bitch had been in œstrum three weeks previous, with no intercourse and no vaginal discharge, made me

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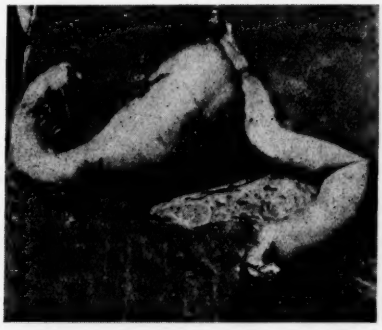
concentrate my attention to the stomach and bowels, especially when vomiting had been present. Then the bowels had acted well after giving the oil, so I was in a greater fix than ever to account for these swellings resembling a dilated stomach and bowel, and not altering in position when the bitch was held up. Of one thing I did feel certain, that if the animal was to be given every chance for its life, the abdomen should be opened, and then view the state of affairs inside. After obtaining the assistance of a colleague, we were no further advanced so far as a positive diagnosis was concerned, but operative interference was decided upon.

After due surgical preparation of some instruments, my hands, and the bitch, she was given chloroform, and her belly opened longi-



The Cornua of the Uterus after Removal.

tudinally in the median line by a 5-inch incision. When the peritoneum had been opened, a bluish structure, about the circumference of a large brush-handle, presented itself. This was the swelling which was lying in the transverse position. This was now withdrawn from the abdomen, and the larger swelling came into view. After a little hesitation I applied traction on the end of the large swelling, and with the assistance of two fingers in the abdomen passing it into the wound, it was quickly brought outside the abdomen. The narrower terminal part was now soon brought out. When the whole of the structure was outside the abdomen it was soon recognised as the uterus and enlarged uterine horns. The intestines were now packed off by sterile gauze, and the uterus and appendages removed by the use of chromic catgut. The packs were then removed, and the peritoneum and muscular layers sutured separately with catgut. Sterile linen was used for the skin. The incision was painted with iodine, and then with collodium. A broad bandage was put on to

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support the body. Next day the bitch seemed brighter. The temperature and pulse had dropped, and she responded to calls more quickly. The vomiting was still present. The bowels and bladder had been emptied during the day. Exactly forty-eight hours after the commencement of the operation the bitch died suddenly. During the day she had been livelier, and had not vomited so much; still, the appetite was wanting. To me the case was exceptionally interesting, as I have never before seen such a large uterus removed, and the difficulty in diagnosis, owing to the location, and probably pressure fixation of the uterus. Was the vomiting of toxic origin from the uterine contents? I am inclined to think it was. The length of time the animal was off its feed made it a poor subject for so severe a procedure. I feel confident that had the operation been done earlier, the outcome would have been different.

I am indebted to Professor A. Stokes, M.D., for examining the tumour found in the larger portion of the uterus. He describes it as an "inflamed polypus."

Weight of the uterus and appendages	4 pounds 11½ ounces.
Length of smaller horn	17 inches.
Contents of smaller horn	12 ounces blood and pus.
Length of larger horn..	19 inches.
Circumference of dilated portion ..	13½ inches.
Contents of larger horn	52 ounces blood pus and a pedunculated tumour the size of a cricket ball, with indentation resembling a cow's uterine colyledon.

Personal

Colonel G. V. Walker, C.I.E., O.B.E., Principal of the Punjab Veterinary College, has recently received the Volunteer Officer's Decoration. Colonel Walker was a keen Volunteer before he joined the Army Veterinary Department, and since being transferred to civil employ he has retained his enthusiasm. He has served as trooper, veterinary officer, and squadron commander in the Punjab Light Horse, which regiment he now commands. During the war he commanded the Poona Rifles, which was reconstructed as the Poona Battalion Indian Defence Force. For his services he was mentioned in despatches by the Commander-in-Chief, and received a military O.B.E.

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CAMBRIDGE University has granted the Degree of M.A. (*honoris causa*) to Professor J. Basil Buxton, F.R.C.V.S., D.V.H. Professor Buxton is the second Veterinary Surgeon to receive this honour, which was accorded for the first time in 1922 to Colonel W. A. Wood, C.B.E., M.R.C.V.S., who holds the University appointment of Lecturer to the Department of Agriculture in Veterinary Science.

MAJOR A. F. CASTLE, F.R.C.V.S., represented the VETERINARY JOURNAL at the Royal Sanitary Institute Conference held at Ipswich on November 17th. Amongst the papers of veterinary interest was one on " Tubercle in Milk," by Dr. W. F. Corfield, M.D., B.S., D.P.H.

ON Friday, December 14th, at the Institute, at 3 p.m., there will be a Conference of Veterinary Officials. Discussion on " Tuberculosis in Cattle and the desirability of allowing the introduction of Breeding Heifers from Canada if certified free from Tuberculosis," to be opened by Alderman William P. Neal, late Chairman of the Cattle Markets Committee, City of London. The Chair will be taken by Louis C. Parkes, M.D., D.P.H., Chairman of Council.

Recent Appointments, etc.

MAJOR GEORGE DUNKIN, M.R.C.V.S., D.V.H., has been appointed Director of Clinical Research to the Field Laboratories of the Medical Research Council, Mill Hill, N. Major Dunkin was, until recently, at Canterbury, where he had a large and influential *clièntele*.

MR. T. J. BOSWORTH, B.Sc., D.V.S.M., M.R.C.V.S., late Director of the Science Department of Messrs. Burroughs, Wellcome & Co.'s Laboratories at Beckenham, and prior to that engaged in the Research Institute of the Royal Veterinary College, Camden Town, has taken an appointment at Cambridge in the Field Laboratory of the Department of Animal Pathology, of which Professor Buxton is the head.

MR. R. E. GLOVER, B.Sc., M.R.C.V.S., has obtained a laboratory appointment under the Medical Research Council in the Medical Research Institute at Hampstead. Mr. Glover has, since graduation, been studying at Alfort and other places by the aid of one of the Research Scholarship Grants of the Ministry of Agriculture.

MR. GALLOWAY, M.R.C.V.S., who recently graduated, has been awarded a Ministry of Agriculture Scholarship, and has just commenced his studies under its auspices.

MR. A. E. MASON, M.R.C.V.S., who has since graduation held the appointment of Lecturer in Pathology and Bacteriology to the Glasgow

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Veterinary College, has been appointed Assistant Pathologist and Bacteriologist to Dr. Billington, M.D., in the Laboratory of the Wolverhampton and Staffordshire General Hospital.

MESSRS. J. W. Thwaites, B.Sc., R. J. Simmons, R. Dunwoody, and J. Carmichael, all M.R.C.V.S., have been appointed to the Colonial Veterinary Department of East Africa, and will sail shortly for Uganda.

MR. THOMAS DALLING, M.R.C.V.S., Chief Investigator, Animal Diseases Research Association (Scotland), has been appointed Chief Veterinary Pathologist to Wellcome Physiological Laboratories.

MR. T. W. M. CAMERON, M.A., B.Sc., M.R.C.V.S., who has just added the degree of Doctor of Philosophy (D.Ph.) to his other numerous scientific qualifications, has been appointed to the position of Lecturer in Veterinary Parasitology and Helminthology to the London Tropical Diseases Institute, Endsleigh Gardens, Euston, W.

MR. D. L. MCWHIRTER, M.R.C.V.S., has been appointed Veterinary Superintendent of the Dairy Farm of the Ice and Cold Storage Company, Hong Kong, China, where he will have charge of about 1,000 dairy cattle (Friesians and Ayrshires) and 4,000 pigs, besides supervising the abattoirs of the company. Mr. McWhirter won the Williams Memorial Prize last year.

THE Third Annual Dinner of R.A.V.C. Old Comrades Association was held at Anderton's Hotel, Fleet Street, E.C., on Friday, the 23rd of November, and was a great success, nearly 200 of the old Corps putting in an appearance. The Chair was taken by the Colonel Commandant, Major-General Sir Layton Bienkinsop, K.C.B., D.S.O.

NOTICES

All communications should be addressed to 8 Henrietta Street, Covent Garden, London, W.C. 2. Telephone: Gerrard 4646. Telegrams: "Baillière, Rand, London."

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